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EXAMINER
TANG, KENNETH

ART UNIT	PAPER NUMBER
2127	

DATE MAILED: 11/22/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Offic Action Summary	Applicati n N . 09/108,527	Applicant(s) TOWNSHEND, BRENT
	Examiner Kenneth Tang	Art Unit 2127

-- Th MAILING DATE of this communicati n appears on the c ver sheet with the c rrespondence address --

Peri d for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *08 September 2002* .

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-34* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-34* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

This final office action is in response to paper number 6, Amendment A, which was received 9/18/02. Applicant's argument with respect to claims 1, 3, 5,10, 15, 19, 26, 29, and 31-32 have been fully considered but they are moot in view of the new ground of rejection. Claims 1-34 are presented for examination.

Specification

1. The disclosure is objected to because of the following informalities:

   - On page 15, line 8 of the specification, the term "element 272" is indefinite.

   Appropriate correction is required.

Claim Rejections - 35 USC § 112

2. Claims 6 and 15 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The term "signature element" in claims 6 and 15 is a relative term which renders the claim indefinite. The term "signature element" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention.

Claim Rejections - 35 USC § 103

3. Claims 1, 2, 10, 19, 26, 27, 29, and 32 are rejected under 35 U.S.C. 103(a) as being unpatentable by Leeds (US 2002/0016824 A1) in view of Horvitz (US 6,161,130).

Referring to claims 1, 26, and 29 Leeds teaches an electronic mail system, method and computer-readable medium *("the computer system 100 further includes a floppy disk drive 114; other removable media devices (e.g., compact disc 119, tape, and removable magneto-optical media (not shown)); and a hard disk 112, or other fixed, high density media drives, connected using an appropriate device bus (e.g., a SCSI bus or an Enhanced IDE bus)", [0022], and e-mail, page 2, 0024)* of automatically generating a set of criteria based on contents of a plurality of emails *("authenticator" to determine if a received email is a junk email, page 1, 0012, Fig. 7)* which comprises:

- receiving an electronic mail message over a network/server *(e-mail message, network, page 3, 0035, e-mail messages automatically scanned and parsed at server, page 2, 0024);*
- determining whether electronic mail message satisfies set of criteria *(scored to probable characteristics, origination, validity and desirability of mail, page 2, 0024, and status of mail as junk e-mail or valid message, page 2, 0025);*
- if electronic mail message satisfies set of criteria, then processing electronic mail message as first type of electronic mail *(junk e-mail, page 2, 0025);*

- if electronic mail does not satisfy set of criteria, then possessing electronic mail message as second type of electronic mail *(valid message, page 2, 0025);*
- wherein first type of electronic mail is processed differently than the second type of electronic mail *(verification request deliverable or undeliverable, pages 2-3, 0026).*

Leeds fails to explicitly teach:

- wherein the step of automatically generating a set of criteria includes, in response to determining that a threshold number of the plurality of electronic mail messages have a particular content, generating criteria that classifies electronic mail messages that have the particular contents as a first type of electronic mail *(junk e-mail, page 2, 0025).*

However, Horvitz teaches using a threshold value to be compared against for filtering out unwanted emails *(threshold value, col 4 line 67 and col 5 lines 1-15)* for the reason to classify messages accordingly to some criteria, where "junk e-email" *(page 2, 0025)* can serve as one type of electronic mail. Furthermore, Horvitz discloses "an invention which discriminates message content through content classifications/criteria *("invention discriminates message content for that recipient, through a probabilistic classifier (e.g., a support vector machine) trained on prior content classifications", see Abstract).* Therefore, it would have been obvious to one ordinary skill in the art at the time the invention was made to include a threshold to the system of Leeds in order to have a point or boundary of the amount of a message content which distinguishes the difference between spam and a legitimate email *(col 4, line 67, and col 5, lines 1-15).*

Referring to claim 2, Leeds teaches the following:

- generating a message signature for an electronic mail message based on contents of an electronic mail message (digitally the signed part, the signature, and the unique code, page 4, 0038);
- determines whether message signature satisfies the set of criteria (check signed part of message against signature, page 4, 0038).

Referring to claim 3, Leeds fails to explicitly teach that determining that a threshold number of said plurality of electronic mail messages have a particular content includes determining that at least a portion of each said plurality of electronic mail messages have said particular content. However, Horvitz teaches using a threshold value to be compared against for filtering out unwanted emails *(threshold value, col 4 line 67 and col 5 lines 1-15)* for the reason to classify messages accordingly to some criteria. Furthermore, Horvitz discloses "an invention which discriminates message content through content classifications/criteria *("invention discriminates message content for that recipient, through a probabilistic classifier (e.g., a support vector machine) trained on prior content classifications", see Abstract).* Therefore, it would have been obvious to one ordinary skill in the art at the time the invention was made to include a threshold to the system of Leeds in order to have a point or boundary of the amount of a message content which distinguishes the difference between spam and a legitimate email *(col 4, line 67, and col 5, lines 1-15).*

Referring to claim 4, while Leeds teaches a confidence rating assigned to a message (page 2, 0024), he fails to explicitly teach tracking how many signature elements

of electronic mail messages match. However, it would be obvious to one of ordinary skill in the art at the time the invention was made that the confidence rating feature of Leeds serves the same function as the signature elements tracker because this tracking of signature elements is used to calculate how "confident" the system is in determining whether the electronic mail is a junk email (page 2, 0024).

Referring to claim 5, it is rejected for similar reasons as stated in the rejection of claim 4. A **message reflecting the counts** is rendered **obvious** as stated for the same reasons as in the rejection of claim 4 because it is inherent that counting is involved with "tracking how many signature elements" there are. Furthermore, it was already stated that Leeds in view of Horvitz discloses generating a message signature for an electronic mail message based on contents of an electronic mail message. Therefore, it would have been obvious to one ordinary skill in the art at the time the invention was made to include the feature of having a message to reflect the counts for the reason of increasing the accuracy of the system by allowing the user to determine the confidence rating assigned to a message *(page 2, 0024)*.

Referring to claim 6, Leeds fails to explicitly teach using at least one signature element that matches a threshold number of signature elements. However, Horvitz does teach the use of comparing a threshold value (threshold, col 9, lines 62-67 and col 10, lines 1-2). Therefore, it would have been obvious to one ordinary skill in the art at the time the invention was made to include a threshold value for comparison in order to have

a point or value which distinguishes the difference between spam and legitimate email (col 9, lines 63 and col 10 lines 1-2).

Referring to claim 7, Leeds fails to explicitly teach the use of associating message signatures with a period of time. However, Horvitz teaches "such a technique should adapt itself to track changes, that occur over time, in both spam and non-spam content subjective user perception of spam" (col 4, lines 24-28). Therefore, it would have been obvious to one ordinary skill in the art at the time the invention was made to associate message signatures with a period of time in order to keep track of when the signature was made.

Referring to claim 8, Leeds explicitly fails to teach adding a bulk electronic mail flag to an electronic mail message. However, it would have been obvious to one ordinary skill in the art at the time the invention was made to include a bulk electronic mail flag to the system of Leeds in order to determine when a bulk electronic mail is received.

Referring to claim 9, Leeds explicitly fails to teach a server adding a bulk electronic mail flag to an electronic mail message. However, it would have been obvious to one ordinary skill in the art at the time the invention was made to have the server include a bulk electronic mail flag to the system of Leeds in order to determine when a bulk electronic mail is received.

Referring to claim 10, Leeds teaches a method of managing electronic mail, the method comprising the steps of:

- a central server receiving from an electronic mail server a message signature generated from an electronic mail message *(e-mail message, network, page 3, 0035, e-mail messages automatically scanned and parsed at server, page 2, 0024, and server, [0024]);*
- an electronic mail server determining whether said message signature satisfies a set of criteria based on message signatures previously received by said central server from a set of electronic mail servers *(scored to probable characteristics, origination, validity and desirability of mail, page 2, 0024, and status of mail as junk e-mail or valid message, page 2, 0025, and "Incoming messages (e-mails) are automatically scanned and parsed, either (1) at a server located at an Internet provider (prior to delivery to the intended ultimate recipient), (2) at a LAN-based receiving station, or (3) at the actual ultimate recipient's mail machine, i.e., local to the user. Once the message has been parsed or broken down into fields, the message is compared with several user defined rules for handling messages, and a confidence rating is assigned to the message.", [0024]);*
- if said received data satisfies a set of criteria, then said electronic mail server processing said electronic mail message as a bulk electronic mail message *(junk e-mail, page 2, 0025);*.

Leeds fails to explicitly teach:

- wherein said set of criteria classifies said electronic mail message and a threshold number of electronic mail messages as having a particular content;

However, Horvitz teaches using a threshold value to be compared against for filtering out unwanted emails *(threshold value, col 4 line 67 and col 5 lines 1-15)* for the reason to classify messages accordingly to some criteria, where "junk e-email" *(page 2, 0025)* can serve as one type of electronic mail. Furthermore, Horvitz discloses "an invention which discriminates message content through content classifications/criteria *("invention discriminates message content for that recipient, through a probabilistic classifier (e.g., a support vector machine) trained on prior content classifications", see Abstract).* Therefore, it would have been obvious to one ordinary skill in the art at the time the invention was made to include a threshold to the system of Leeds in order to have a point or boundary of the amount of a message content which distinguishes the difference between spam and a legitimate email *(col 4, line 67, and col 5, lines 1-15).*

Referring to claim 11, it is rejected for the same reason as in the rejection of claim 4.

Referring to claims 15 and 31, Leeds teaches the following:

- a server receiving message signatures from emails, where each message signature includes one or more signature elements *(digitally the signed part, the signature, and the unique code, page 4, 0038);*
- server generating counts of matching signature elements of the emails *(confidence rating assigned to message, page 2, 0024);*

Leeds fails to explicitly teach having the server be a central server. However, it would have been obvious to one ordinary skill in the art at the time the invention was made that a central server could also perform the same function as a regular server. Leeds also fails to explicitly teach the central server transmitting a message that reflects the counts. However, a **message reflecting the counts** is rendered **obvious** as stated for the same reasons as in the rejection of claim 4 because it is inherent that counting is involved with "tracking how many signature elements" there are. Therefore, it would have been obvious to one ordinary skill in the art at the time the invention was made to include the feature of having a message to reflect the counts for the reason of increasing the accuracy of the system by allowing the user to determine the confidence rating assigned to a message *(page 2, 0024)*.

Referring to claim 16, it is rejected for the same reasons as in the rejection of claim 15.

Referring to claim 17, Leeds fails to explicitly teach of reflecting and transmitting at the same time. However, it would have been obvious to one ordinary skill in the art at the time the invention was made to include this feature into Leeds's system because transmitting and reflecting at the same time would increase efficiency.

Referring to claim 18, Leeds fails to explicitly teach of transmitting messages reflecting counts at the same time as transmitting signature elements associated with counts greater than the threshold. However, it would have been obvious to one ordinary

skill in the art at the time the invention was made to add this feature to Leeds's system in order to increase efficiency.

Referring to claims 19 and 32, Leeds teaches the system, method and a computer-readable medium carrying one or more sequences of one or more instructions for managing electronic mail *("media devices", and e-mail, page 2, 0024)* of automatically generating a set of criteria based on contents of a plurality of emails *("authenticator" to determine if a received email is a junk email, page 1, 0012, Fig. 7)*, wherein the execution of the one or more sequences of the one or more instructions causes the one or more processors to perform the steps of:

- receiving an electronic mail message over a network (e-mail message, network, page 3, 0035, e-mail messages automatically scanned and parsed at server, page 2, 0024);
- generating a message signature for said electronic mail message by applying contents of said electronic mail message to a function that produces said message signature (digitally the signed part, the signature, and the unique code, page 4, 0038);
- if electronic mail message satisfies set of criteria, then processing electronic mail message as first type of electronic mail (junk e-mail, page 2, 0025);
- if electronic mail does not satisfy set of criteria, then possessing electronic mail message as second type of electronic mail (valid message, page 2, 0025);

Leeds fails to explicitly teach:

- determining whether said message signature satisfies a set of criteria that indicates said electronic mail message and a threshold number of electronic mail messages have a particular content.

However, Horvitz teaches using a threshold value to be compared against for filtering out unwanted emails *(threshold value, col 4 line 67 and col 5 lines 1-15)* for the reason to classify messages accordingly to some criteria, where "junk e-email" *(page 2, 0025)* can serve as one type of electronic mail. Furthermore, Horvitz discloses "an invention which discriminates message content through content classifications/criteria *("invention discriminates message content for that recipient, through a probabilistic classifier (e.g., a support vector machine) trained on prior content classifications", see Abstract).* Therefore, it would have been obvious to one ordinary skill in the art at the time the invention was made to include a threshold to the system of Leeds in order to have a point or boundary of the amount of a message content which distinguishes the difference between spam and a legitimate email *(col 4, line 67, and col 5, lines 1-15).*

Referring to claim 28:

- wherein determining that a threshold number of said plurality of electronic mail messages have a particular content includes determining that at least a portion of each of said plurality of electronic mail messages have said particular content.

Horvitz discloses using a threshold value to be compared against for filtering out unwanted emails (threshold value, col 4 line 67 and col 5 lines 1-15) for the reason to classify messages accordingly to some criteria. It is inherent that during the comparison of the threshold values, a determination is made whether the lower bound of the portion is satisfied or not.

Referring to claim 30, it is rejected for the same reasons as in the rejection of claim 3.

Referring to claim 31, it is rejected for the same reasons as in the rejection of claim 4.

4. Claims 12, 13, 14, and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Leeds (US 2002/0016824 A1) in view of Natarajan (US 2002/0016916 A1).

Referring to claim 12, Leeds fails to explicitly teach the use of a one-way hash function for matching threshold values to portions of the message signature. However, Natarajan teaches the use of a one-way hash function for signatures. Therefore, it would have been obvious to one ordinary skill in the art at the time the invention was made to include Natarajan's teaching of a one-way hash function into the existing system of Leeds because it is the preferred mode to obtain a message digest (one-way hash function to obtain a message digest, page 1, 0006).

Referring to claim 13, Leeds teaches transmitting messages to an electronic mail server for generating message signatures. However, the combination system of Leeds and Natarajan fails to explicitly teach specifying changes to one or more routines invoked by the electronic mail server to perform this. It would have been obvious to one ordinary

skill in the art at the time the invention was made to include the ability to use changes to one or more routines for the Leeds and Natarajan combination system because it would give the system more functionality.

Referring to claim 14, Leeds explicitly fails to teach transmitting messages by platform-independent byte code. However, it would have been obvious to one ordinary skill in the art at the time the invention was made to add the platform-independent byte code feature to the existing combination system of Leeds and Natarajan so that it can run on any given system.

Referring to claim 20, Leeds explicitly fails to teach using a one-way hash function that receives content from an email as input and a message signature as output. However, Natarajan teaches using a one-way hash function that receives the "source data of the digital object" as input and outputs an "encrypted message digest" (0006). Therefore, it would have been obvious to one ordinary skill in the art at the time the invention was made to include the one-way hash function with these I/O features of Natarajan to the system of Leeds because it is well known that it is a technique for identifying a digital object (0006).

5. Claims 21-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Leeds (US 2002/0016824 A1) in view of Shaw (US 20020026634).

Referring to claims 21-23, Leeds fails to explicitly teach using a remote server for generating message signatures. However, Shaw teaches using the remote server (Figure 1, 60) to receive code (page 2, 0030) and for signatures (page 2, 0030 and 0031). Therefore, it would have been obvious to one ordinary skill in the art at the time the invention was made to make the server of Leeds remote because it is well known that it can already be done.

Referring to claim 24, the combination system of Leeds and Shaw fails to explicitly teach using platform-independent byte code. However, it would have been obvious to one ordinary skill in the art at the time the invention was made to include this feature to the existing Leeds and Shaw system in order for it to have the flexibility to operate on any given system.

Referring to claim 25, the combination system of Leeds and Shaw fails to explicitly teach using machine executable code. However, it would have been obvious to one ordinary skill in the art at the time the invention was made to include this feature to the existing Leeds and Shaw system so that any programs can be executed.

Referring to claim 27, it is rejected for the same reasons as in the rejection of claim 2.

Referring to claim 33, it is rejected for the same reasons as in the rejection of claim 23.

Referring to claim 34, it is rejected for the same reasons as in the rejection of claim 24.

ARGUMENT AND REMARKS BASED ON 35 USC 112

6. In the remarks, Applicant argued, with respects to claims 6 and 15 being rejected under 35 USC 112, second paragraph, that the term "signature elements" was clearly defined in the specification. Applicant also attempts to point out where the term "signature elements" is located in the specification by illustrating a specific passage. In response, it is acknowledged that the specific passage discloses how the "signature elements" are used but fails to explicitly define the term. It is well understood that a "signature element" is an element of a signature. However, the term "signature element" in claims 6 and 15 is a relative term, which renders the claim indefinite. The term "signature element" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. Therefore, a rejection of 35 USC 112, second paragraph is proper.

7. Rejection under 35 USC 112, second paragraph of claim 13 was reconsidered and request for removal is granted.

ARGUMENT AND REMARKS BASED ON PRIOR ART

8. In the remarks, Applicant argued, with respects to claims 1, 3, 10, 19, 26, 29, and 32, that the cited art does not disclose or suggest in any way generating criteria that "classifies electronic mail messages that have said particular content" in response to "determining that a threshold number of said plurality of electronic mail messages have [the] particular content." In response, the reference of Horvitz teaches using a threshold value to be compared against for filtering out unwanted emails *(threshold value, col 4 line 67 and col 5 lines 1-15)* for the reason to classify messages accordingly to some criteria, where "junk e-email" *(page 2, 0025)* can serve as one type of electronic mail. Furthermore, Horvitz discloses an invention which discriminates message content through particular content classifications/criteria *("invention discriminates message **content** for that recipient, through a probabilistic classifier (e.g., a support vector machine) trained on prior **content classifications**", see Abstract)*. Therefore, it would have been obvious to one ordinary skill in the art at the time the invention was made to include a threshold to the system of Leeds in order to have a point or boundary of the amount of a message content which distinguishes the difference between spam and a legitimate email *(col 4, line 67, and col 5, lines 1-15)*. The references of Leeds and Horvitz are in the same field of endeavor of junk email detection, so therefore, the combination of the two references is proper.

9. Applicant argues, with respects to claims 15 and 31, that the cited art fails to disclose or suggest in any way the limitation of "counts of how many times said one or more signature elements are matched by signature elements from message signatures

generated for other electronic mail messages." In response, however, a **message reflecting the counts** is rendered **obvious** as stated for the same reasons as in the rejection of claim 4 because it is inherent that counting is involved with "tracking how many signature elements" there are. Therefore, it would have been obvious to one ordinary skill in the art at the time the invention was made to include the feature of having a message to reflect the counts for the reason of increasing the accuracy of the system by allowing the user to determine the confidence rating assigned to a message *(page 2, 0024)*.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kenneth Tang whose telephone number is (703) 305-5334. The examiner can normally be reached on 9:00am-6:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Follansbee can be reached on (703)305-8498. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 746-7239 for regular communications and (703) 746-7238 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is none.

kt
November 12, 2002

MAJID A. BANANKHAH
PRIMARY EXAMINER